

EUROPEAN SURVEY REGARDING INDICATIONS AND CONTRAINDICATIONS FOR REPLANTATION OF THE UPPER LIMB

1. The most important informations before the transfer of the patient to the unit in case of secondary referral are: Age (68,75 %); Affected Side (65,63 %); Level (68,65 %); Associated Traumas (68,65 %).

No consensus for: Time Of Accident, Type Of Injury, Local Temperature, Bacterial Or Chemical Contamination / Physical damage, Blood And X-Ray Examination, Associated Diseases, Ischemia Time, Patient's motivation, Psychological Statu, All of them.

2. The required informations should be provided before transfer if possible but it is not mandatory (71,88 %).

No consensus for: Yes, Mandatory before accepting the patient, No, it will not change acceptance of the patient.

3. An hypothermic (with refrigerated amputated segment) ischemia period: > 6 hours for macro-replantations (segments containing muscles) and > 12 hours for micro-replantations: a) is not an absolute contraindication for micro-replantation (75,00 %) and b) is not an absolute contraindication for macro-replantation (65,63 %).

4. A normothermic (with amputated segment at room temperature) ischemia period: > 4 hours for macro-replantations (segments containing muscles) > 12 hours for micro-replantations is not an absolute contraindication for macro-replantation (65,63 %).

No consensus for: is an absolute contraindication for micro-replantation, is a relative contraindication for: micro-replantation, is a relative contraindication for: macro-replantation, is not a controindication for micro-replantation, is not a controindication for macro-replantation.

5. Only polytrauma (ISS > 15) and organ transplanted patients are relative general contraindications to replantation (68,75 %).

No consensus for: Head Injury (commotive trauma or bad G.C.S.), Age > 70, Self inflicted injury, Psychiatric disorders, Smoking (not to be considered the occasional smokers), Alcohol overuse, Diabetes.

6. Multiple level injuries (with multiple vascular lesions) (65,63 %), avulsions (with traction lesions of several structures: nerves, vessels, tendons, etc.) (68,65 %) and prolonged ischemia time (> 4 hours in macroreplantation → > 12 hours for microreplantation (68,75 %) are relative local contraindication to replantation.

No consensus for: Crushing (with extensive tissue damage precluding revascularization with a direct suture), High bacterial contamination, Physical lesion – chemical contamination (frozen burned limbs, contaminated by chemical agen).

7. The following guide-lines regarding the preservation and transportation of amputated segments are important (75,00 %).

8. Single digit replantation (except thumb): (from MP to P2).

No consensus for: Is replantation of a single digit indicated?

9. Distal (distal to FDS insertion) replantation (except thumb).

No consensus for: Is distal replantation indicated?

10. Multiple digits (> 2 fingers) replantations.

No consensus for: Do you believe that for this type of replantation a special organisation is required ? (double equipe?)

11. The thumb should always be replanted (84,38 %).

12. Age > 70 years (78,13 %), smoking (71,88 %) and a distal amputation (68,75 %) are not contraindications to thumb replantation (68,75 %).

No consensus for: Polytrauma (ISS > 15), Crushing, Avulsion.

13. Very proximal level of injury (proximal to the elbow) (71,88 %), transarticular amputations (78,13 %) and amputations through neuromuscular junction (68,75 %) are not local contraindications for major limb replantation.

No consensus for: Multiple level, Type of injury: crush, avulsion.

14. A standardized protocol of adjuvant medical therapy in replantation is useful (81,25 %) and should include heparin (65,63 %) and acetylsalicylic acid (78,13 %).

No consensus for: Low-molecular weight dextran, Sympathetic blocks, Vasodilators.

15. Leeches as non medical adjuvant therapy in microreplantations are useful (75 %).

No consensus for: Decongesting incisions, Nail-bed incisions.

16. The useful indicators to assess the final results after replantation surgery are: Semmes Weinstein sensibility test (68,75 %), Motor function of the reinnervated muscles (78,13 %), Articular range of motion (active and passive) (75,00 %), Pinch and Jamar test (68,75 %), DASH or other objective / subjective evaluation (71,88 %).

No consensus for: Weber sensibility test, Cold intolerance, All of them.

17. The complications to be used as parameters to value indications to replantation are: % of survival (75,00 %) and poor motor and sensory function (65,63 %).

No consensus for: % of infections, % of intolerance, % of non union, All of them.

18. The best classifications to assess functional results in upper limb replantations are: Jones 1982 (65,63 %) and Blomen 1988 (65,63 %).

No consensus for: Chen 1978, Berger 1980, Tamai 1982/1983, Milroy 1991.